

1/17

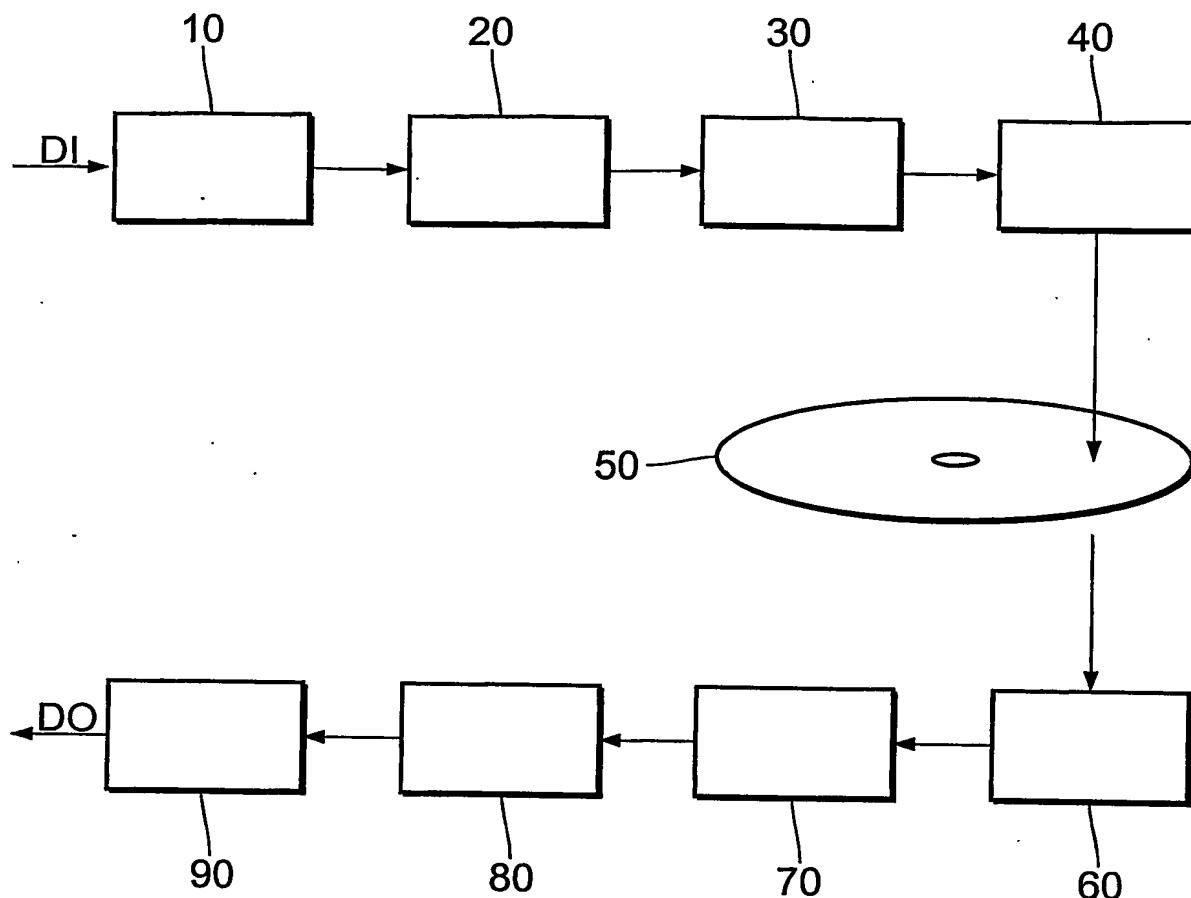


FIG.1

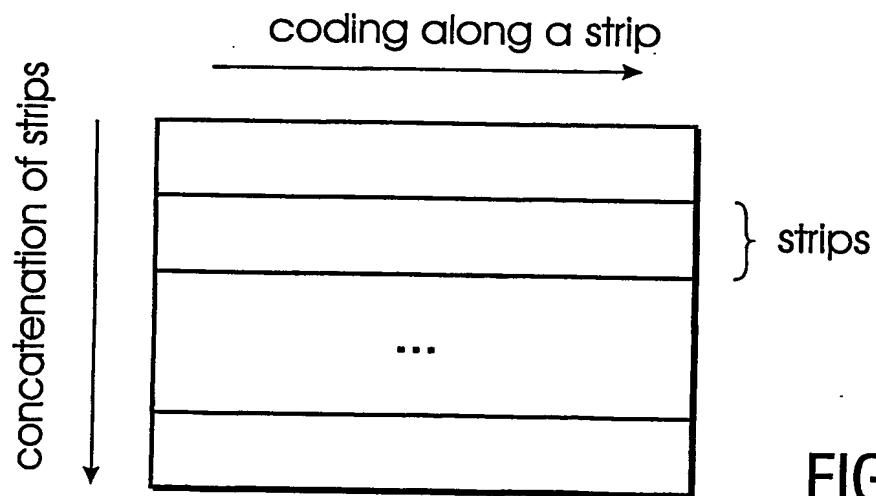


FIG.2

2/17

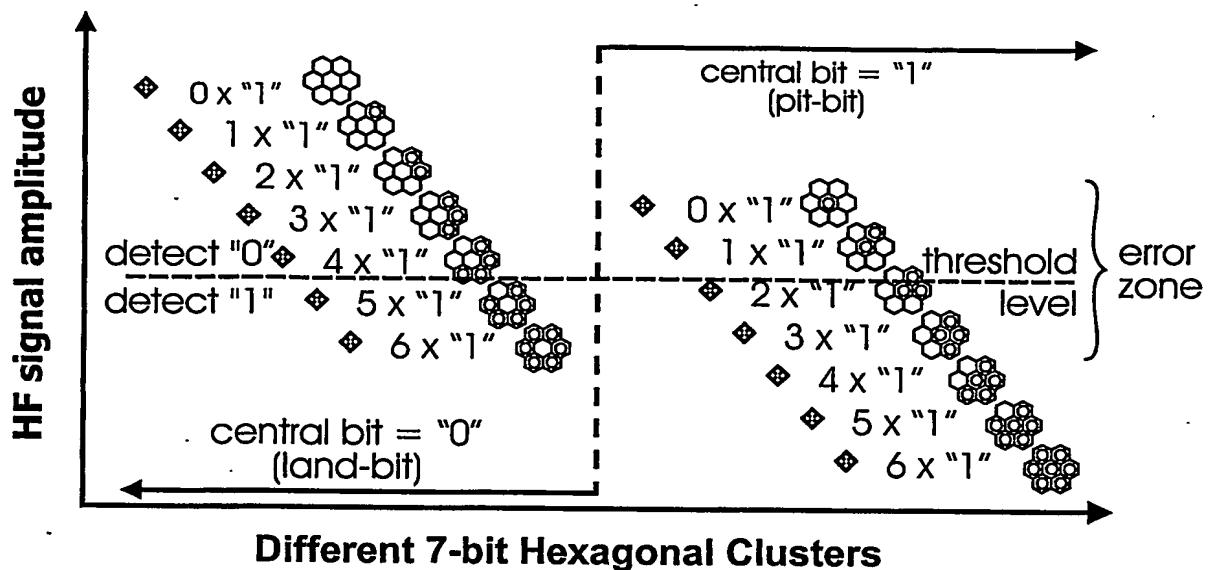


FIG.3

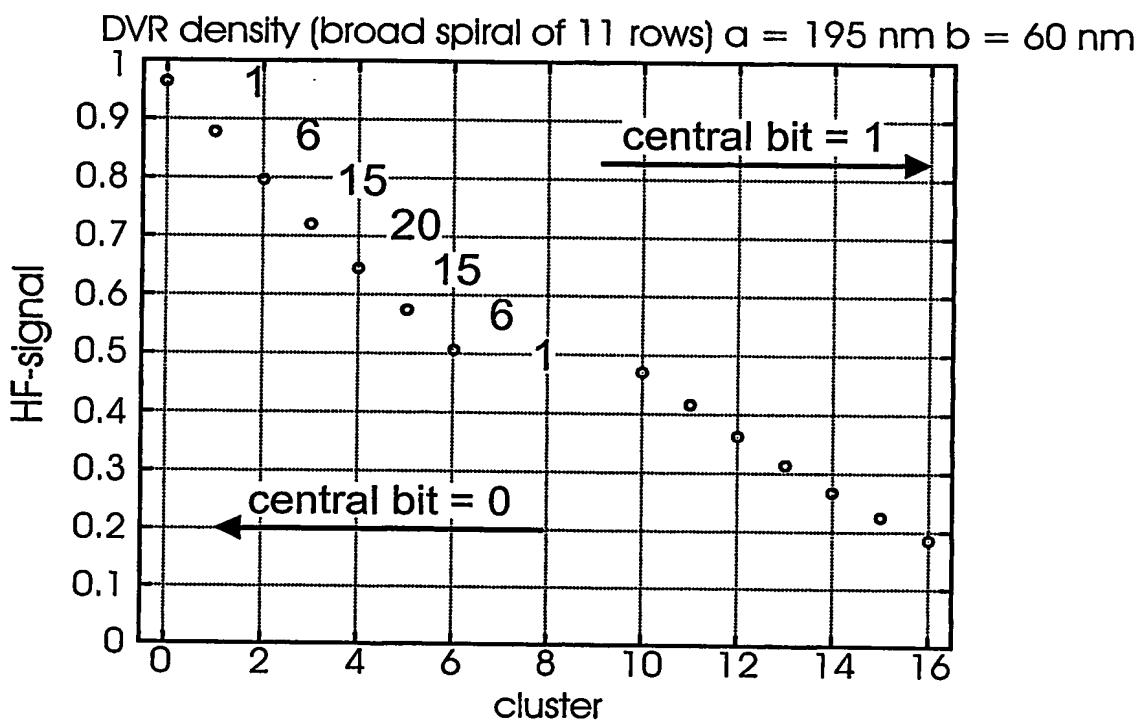
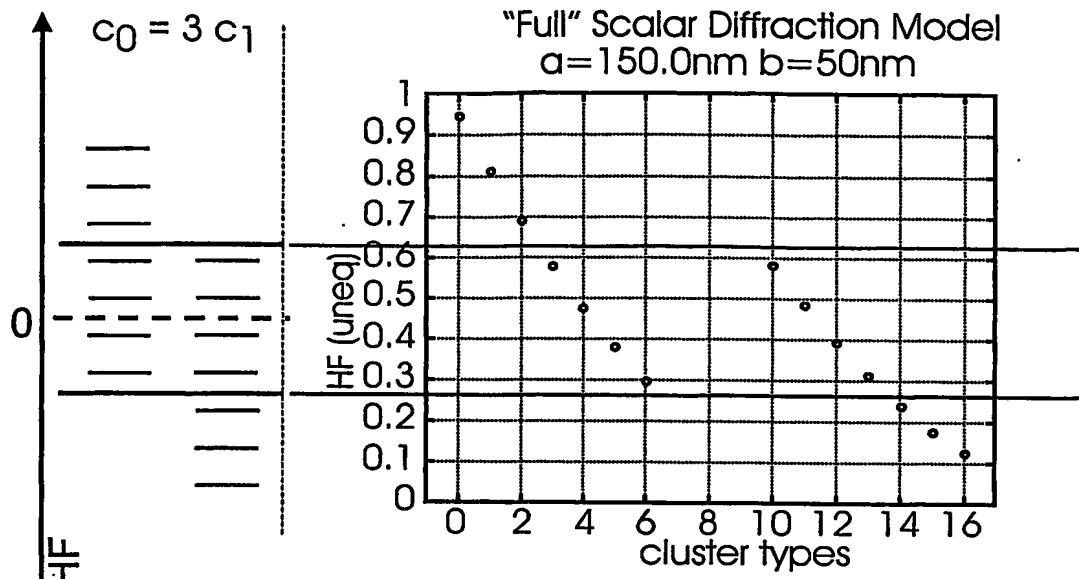


FIG.4

3/17

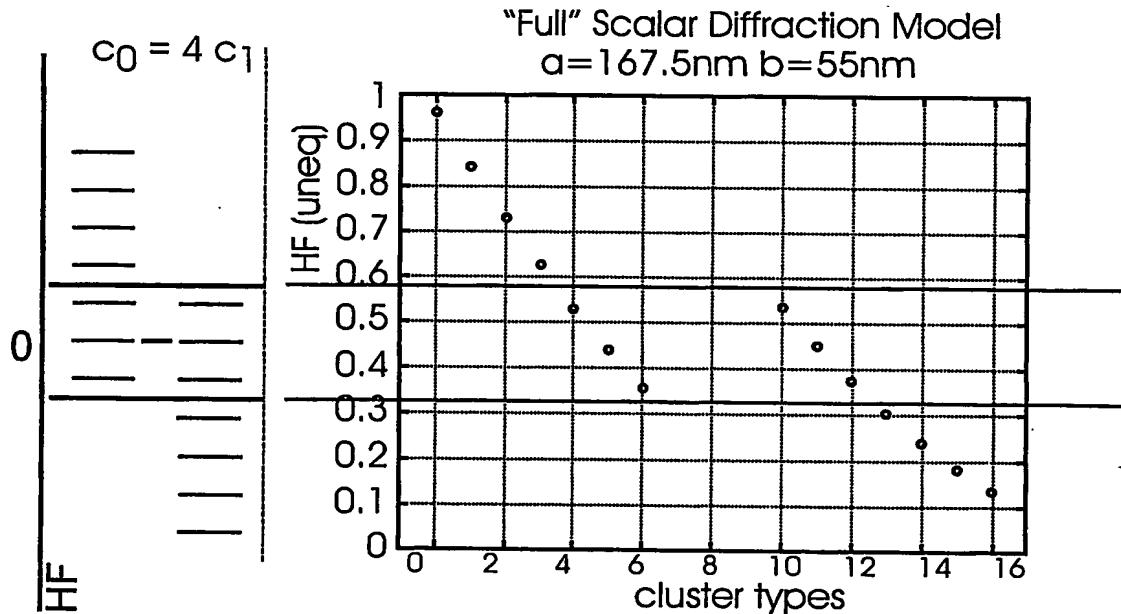


$$a_{\text{Hex-2D}} = 150 \text{ nm} \quad S_{2D} \text{ <user bit>} = 0.3433 [\lambda / (2\text{NA})]^2$$

$$S_{\text{DVR}} \text{ <user bit>} = 0.6343 [\lambda / (2\text{NA})]^2$$

FIG.5

$\times 1.85$
 $\times 11/12 = 1.69$



$$a_{\text{Hex-2D}} = 167.5 \text{ nm} \quad S_{2D} \text{ <user bit>} = 0.4281 [\lambda / (2\text{NA})]^2$$

$$S_{\text{DVR}} \text{ <user bit>} = 0.6343 [\lambda / (2\text{NA})]^2$$

FIG.6

$\times 1.48$
 $\times 11/12 = 1.36$

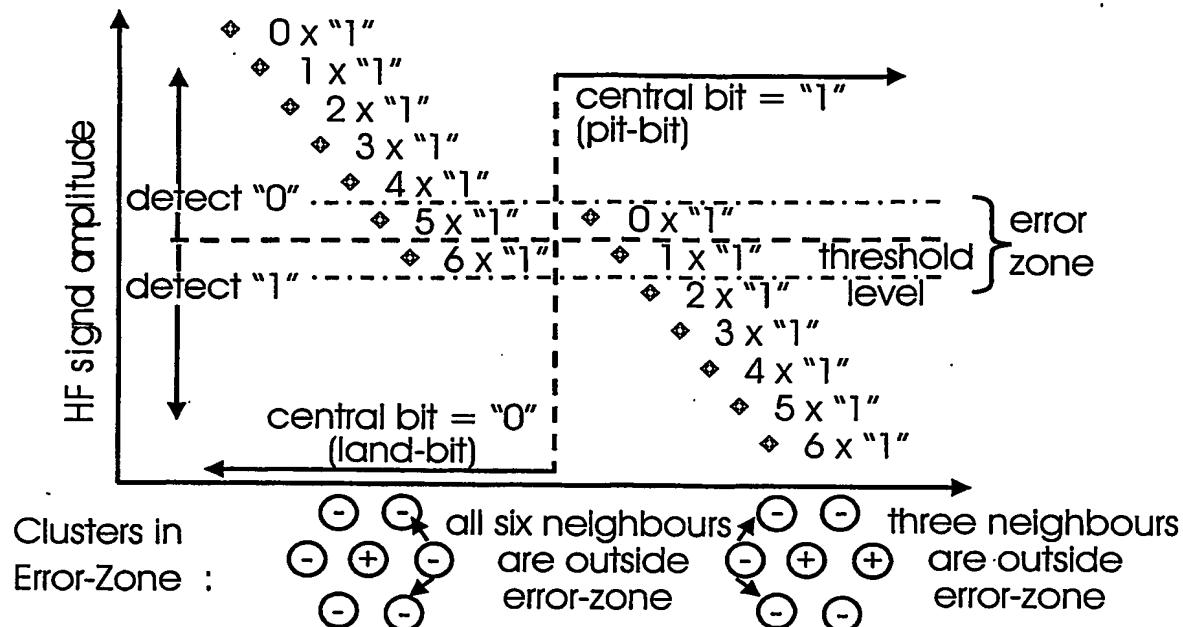


FIG. 7

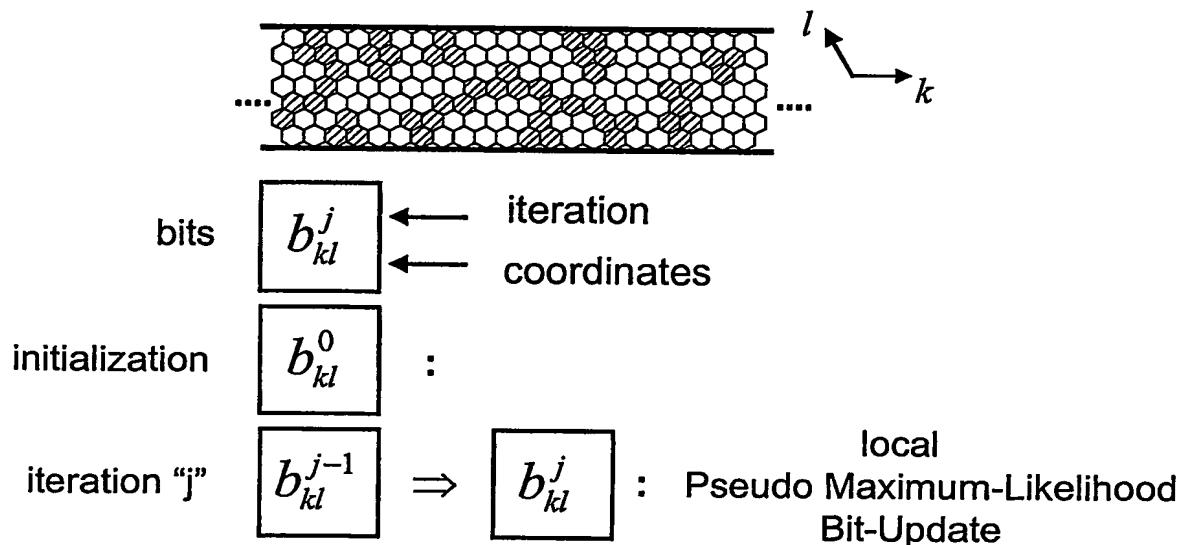
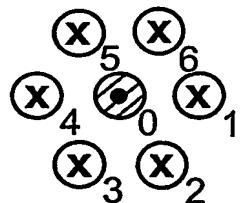


FIG. 8

5/17



- ⊗ = nearest-neighbour bit
(bit-value from previous iteration)
- ⊗ = central-bit or core-bit
(bit-value to be determined
in current iteration)

FIG.9

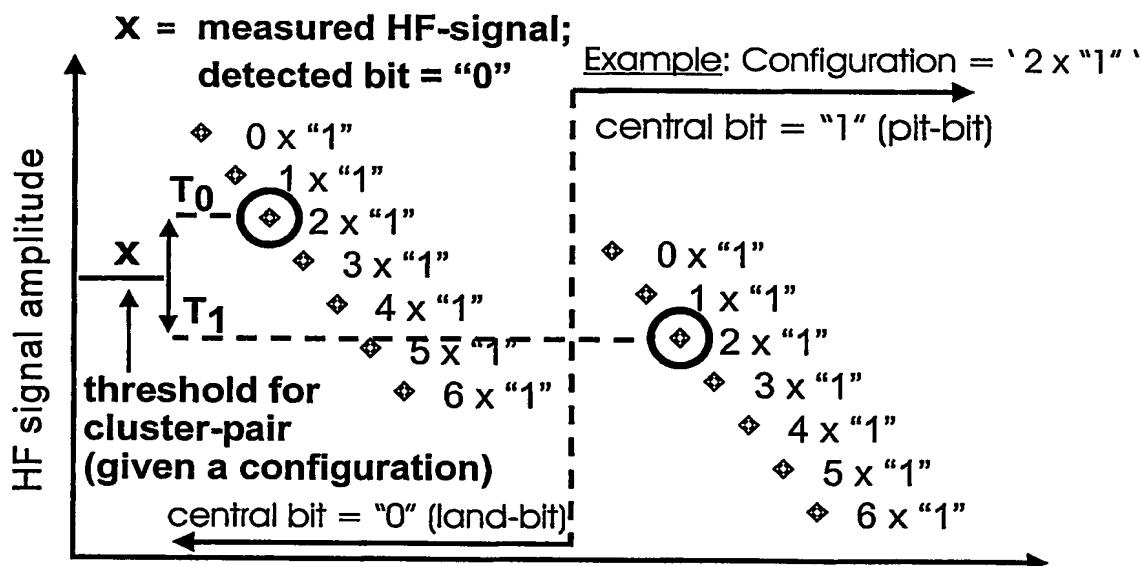


FIG.10

6/17

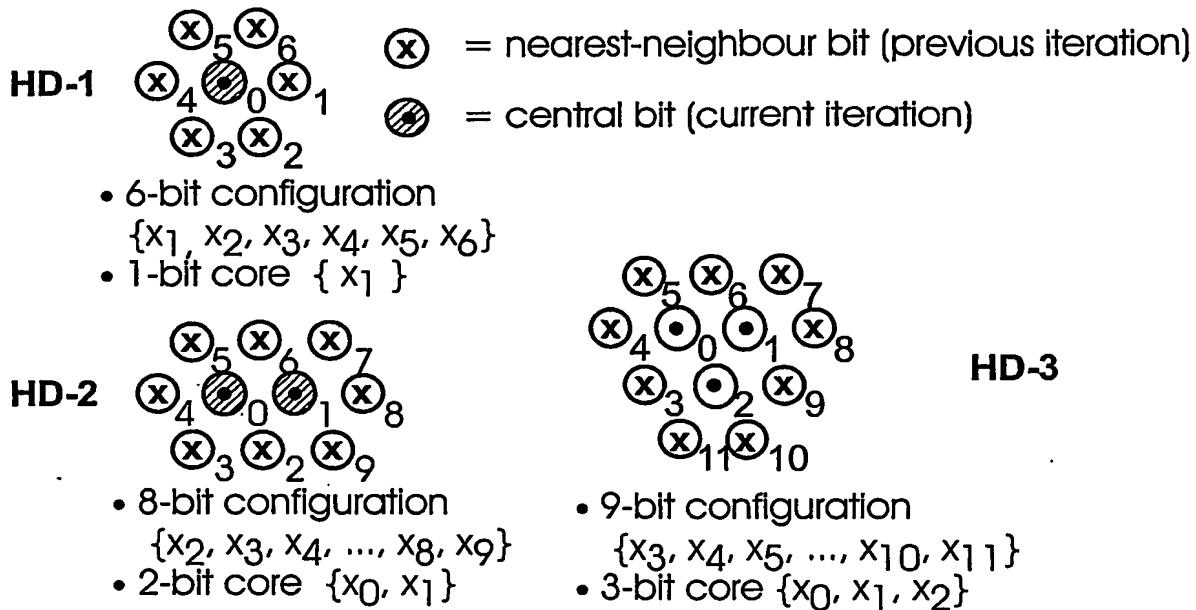


FIG.11

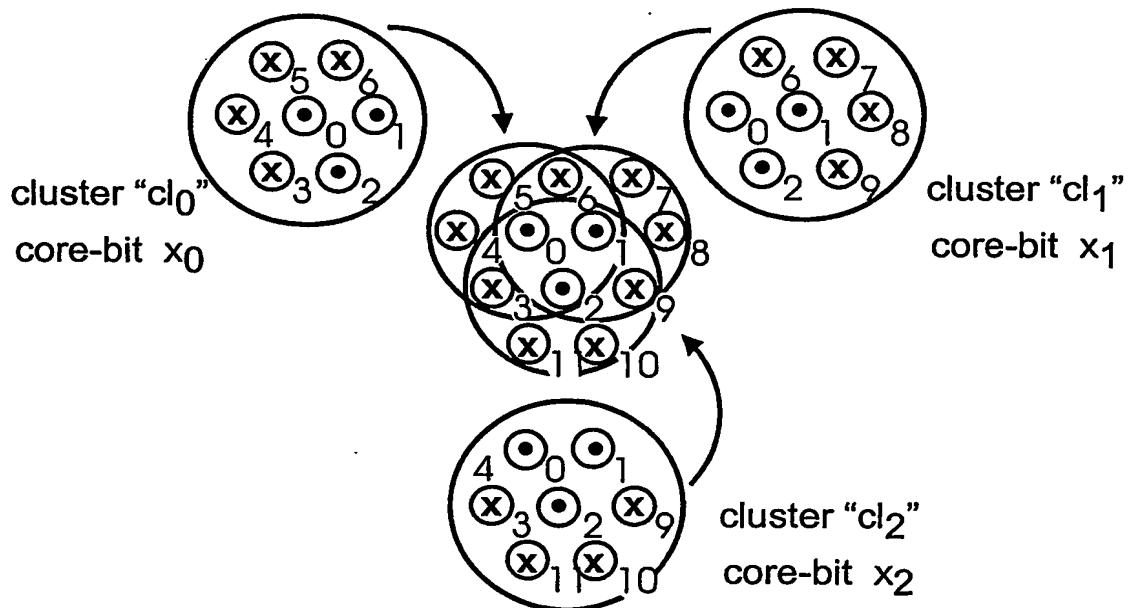


FIG.12

7/17

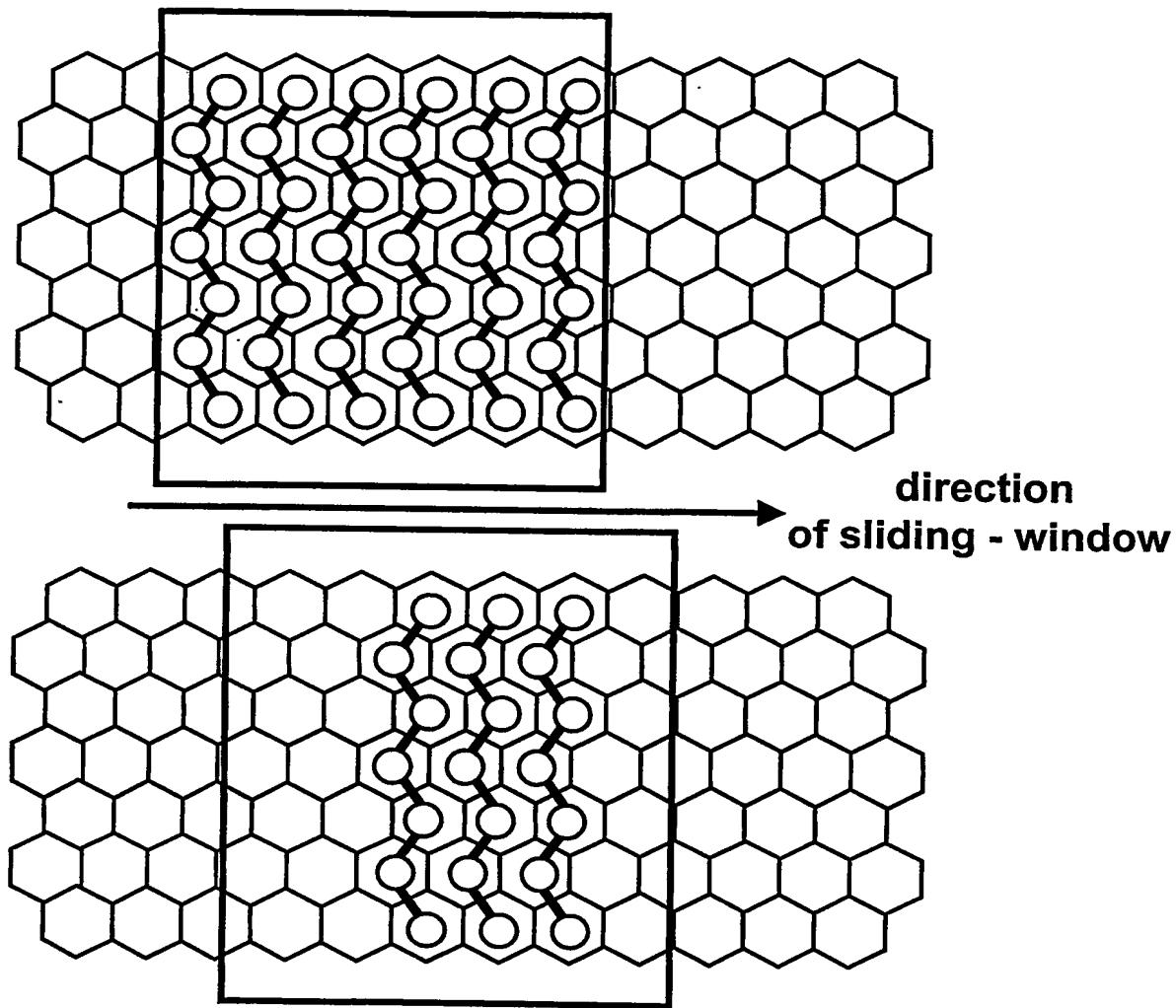


FIG.13a

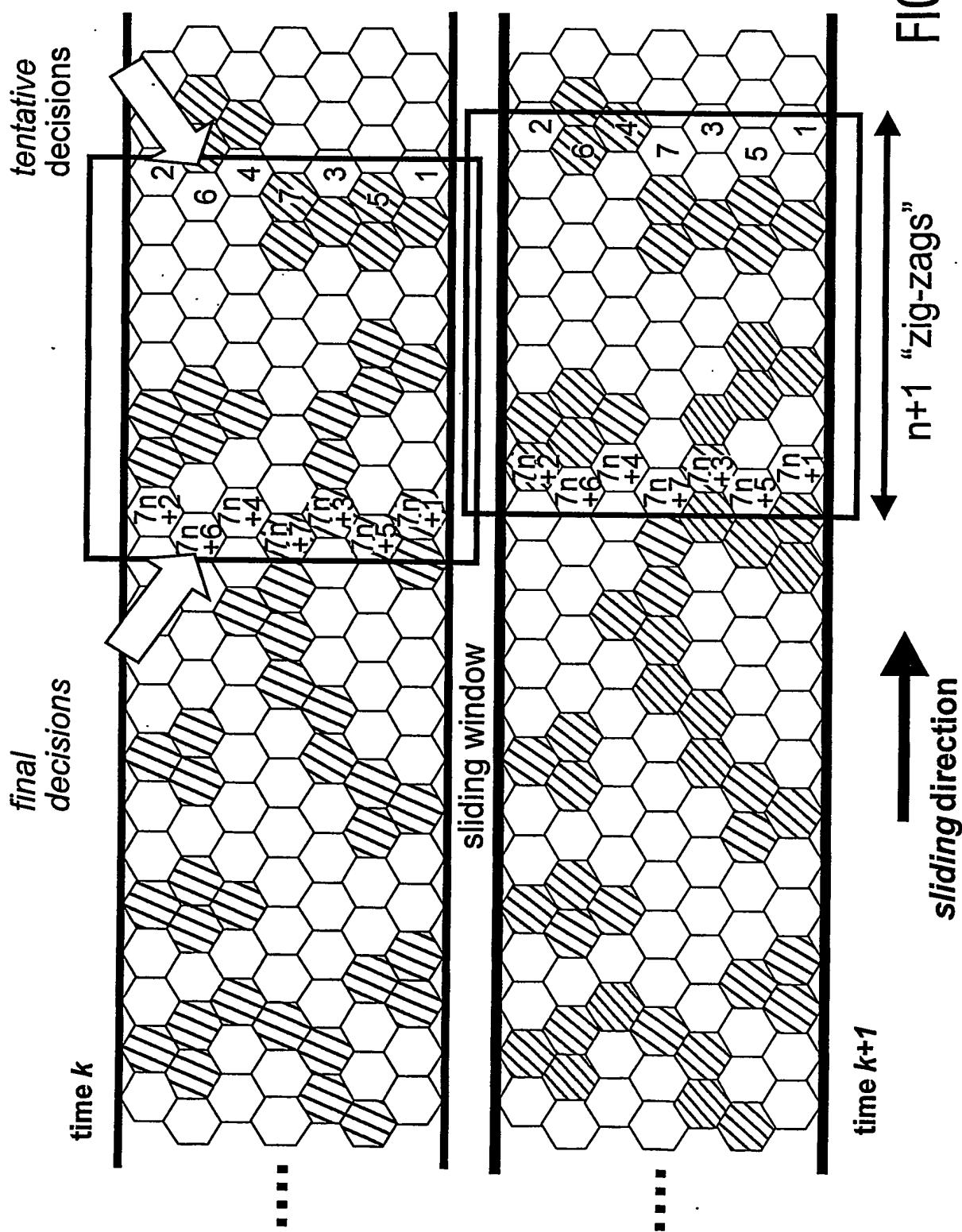
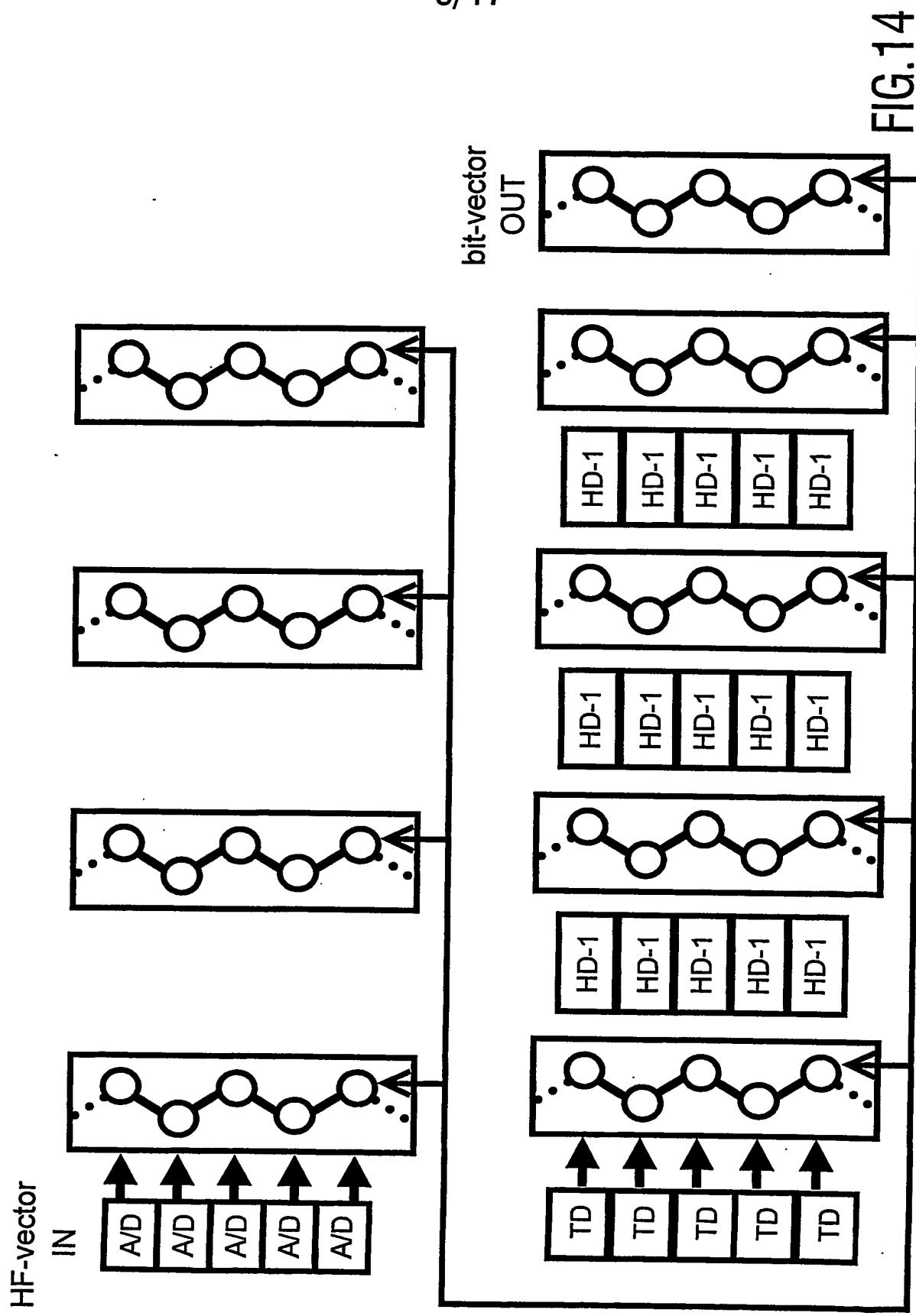


FIG. 13b

$n+1$ “zig-zags”

9/17



10/17

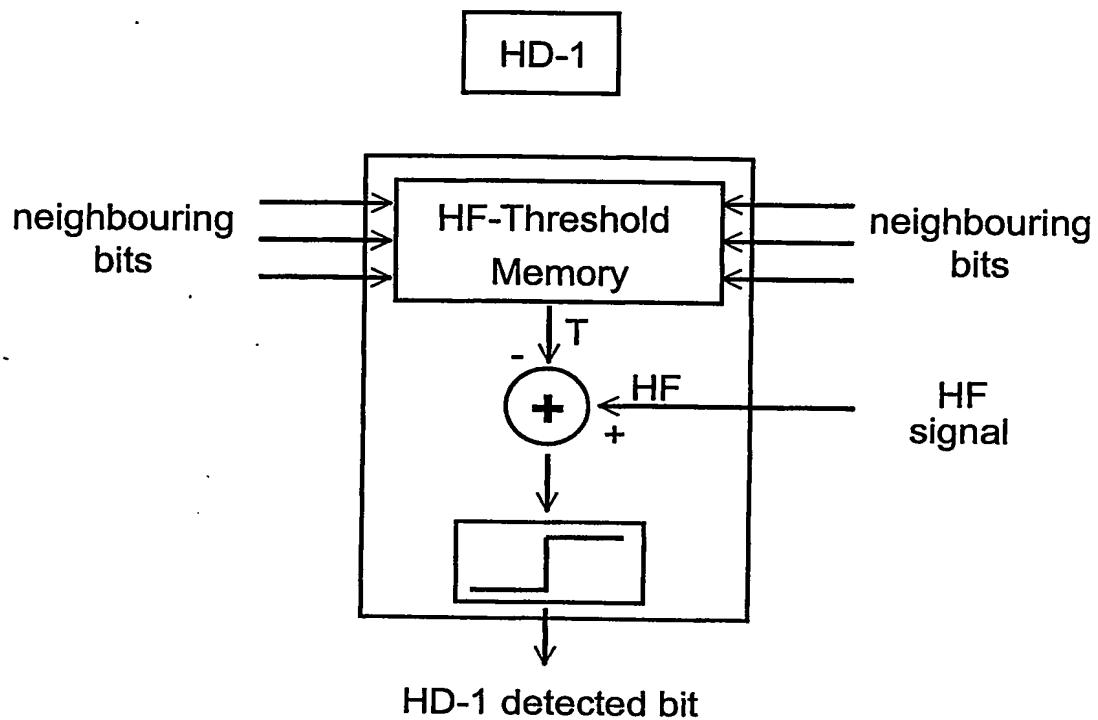
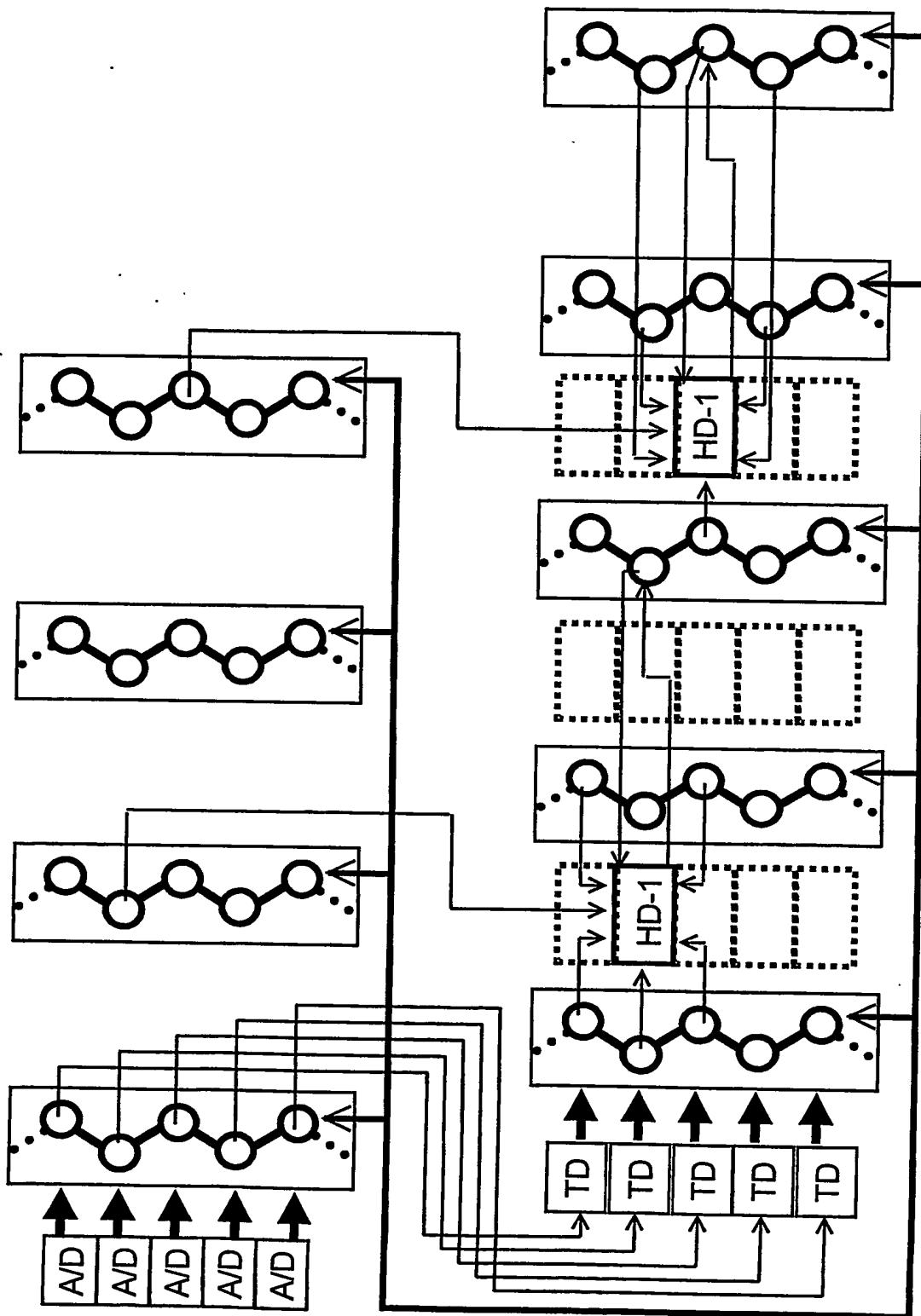


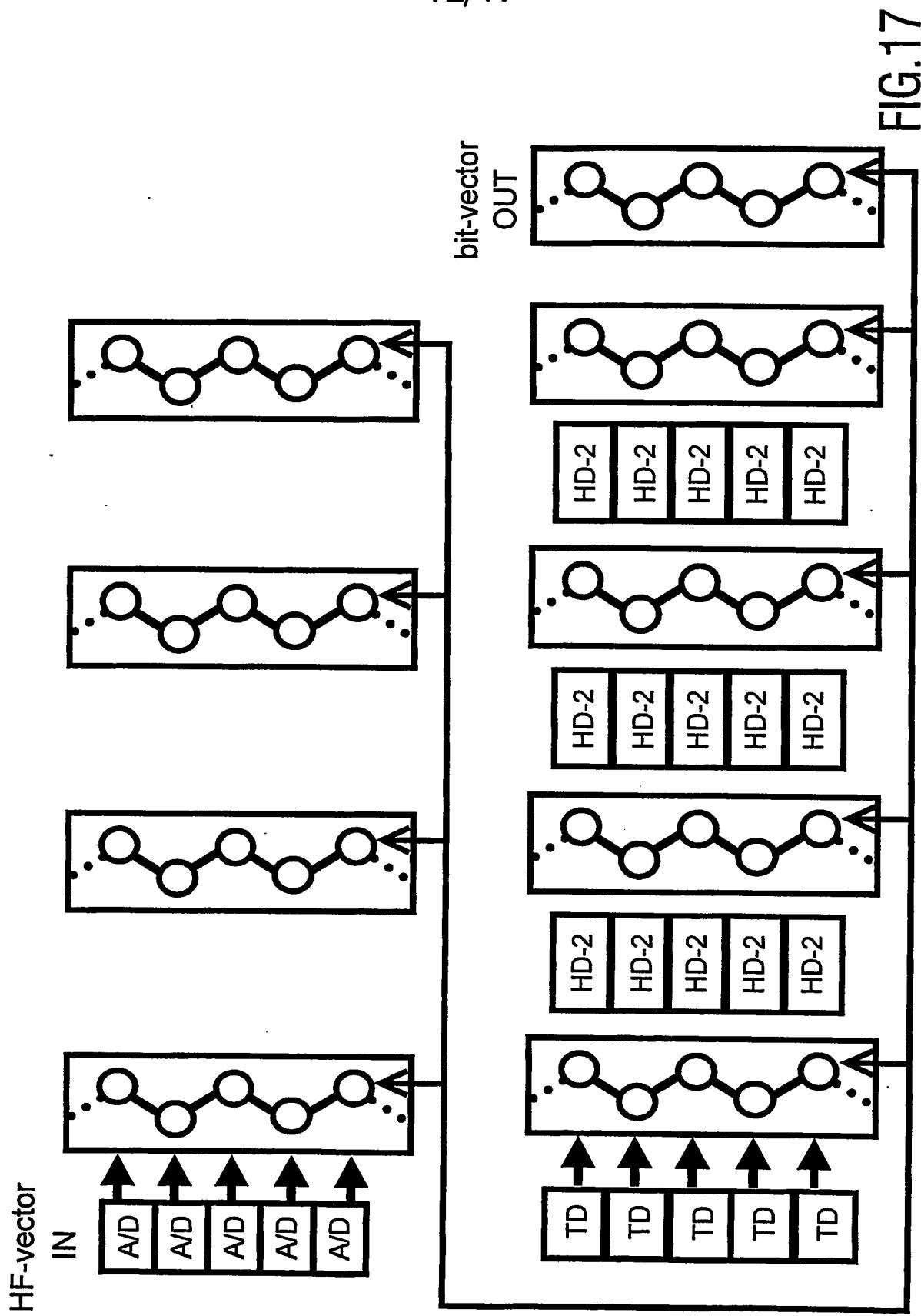
FIG.15

11/17

FIG. 16

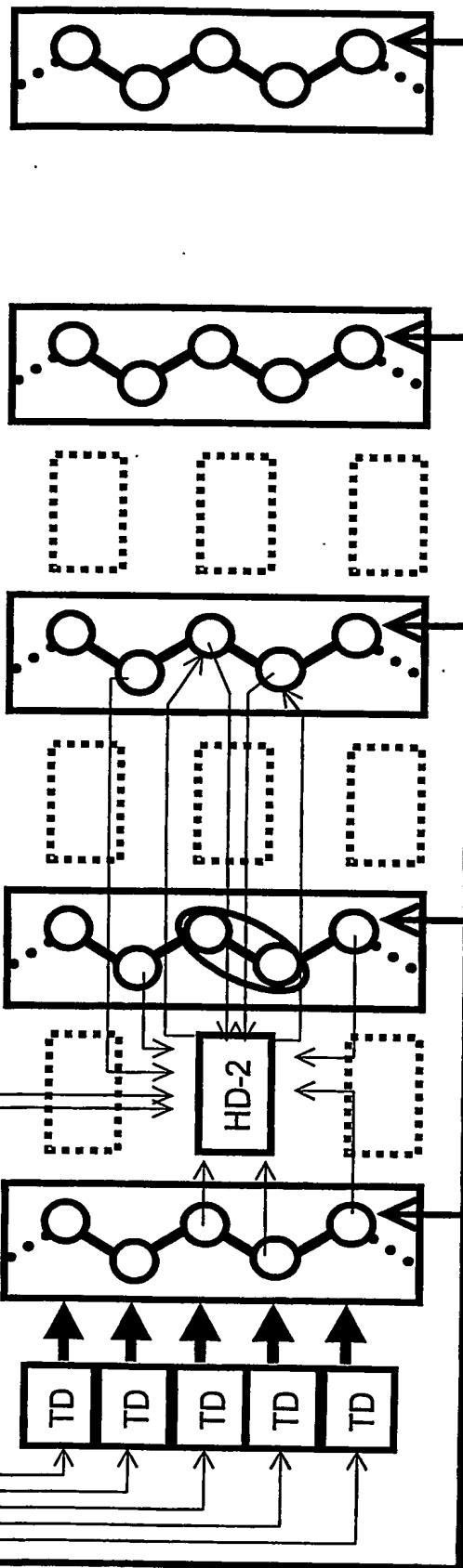
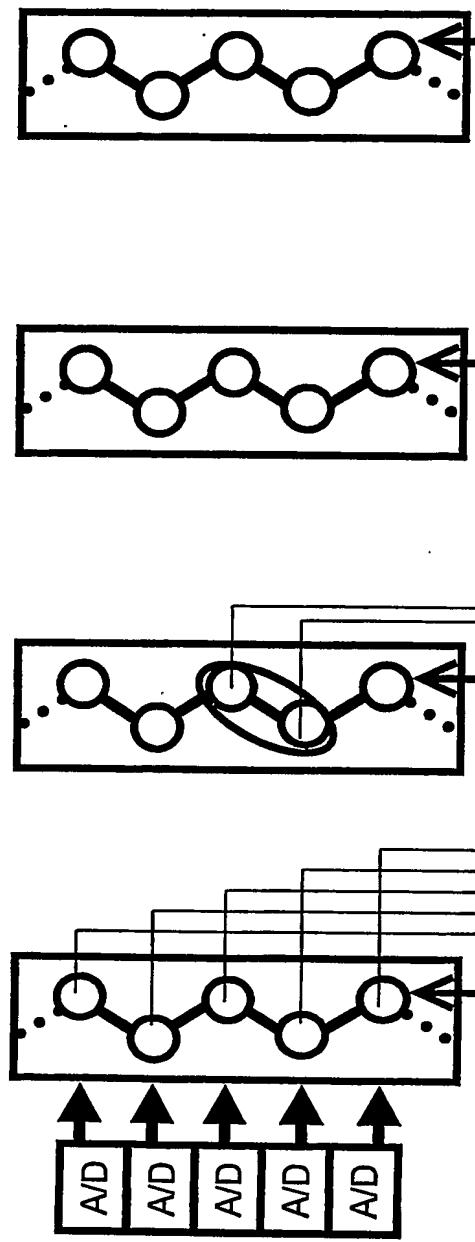


12/17



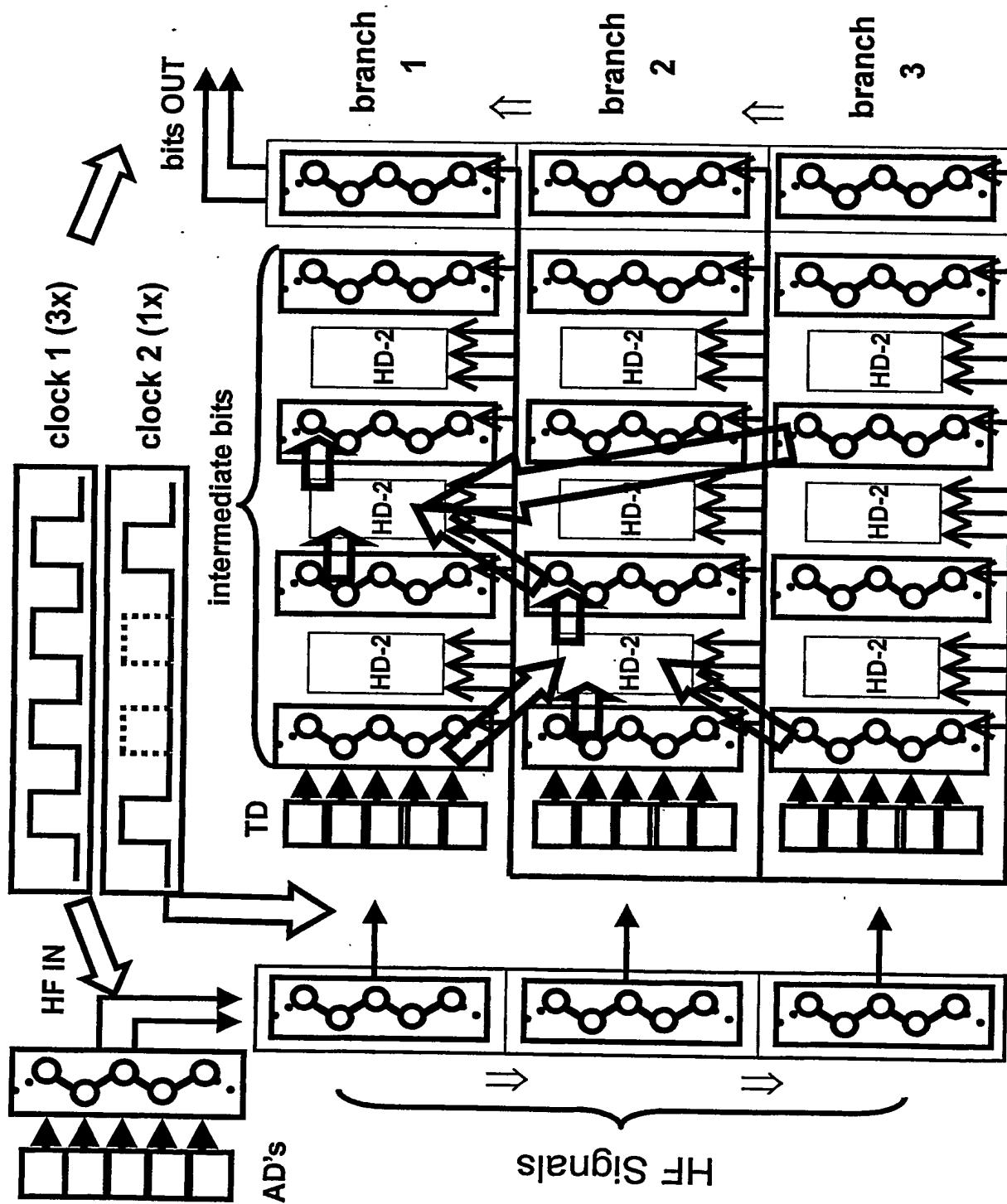
13/17

FIG. 18



14/17

FIG. 19



15/17

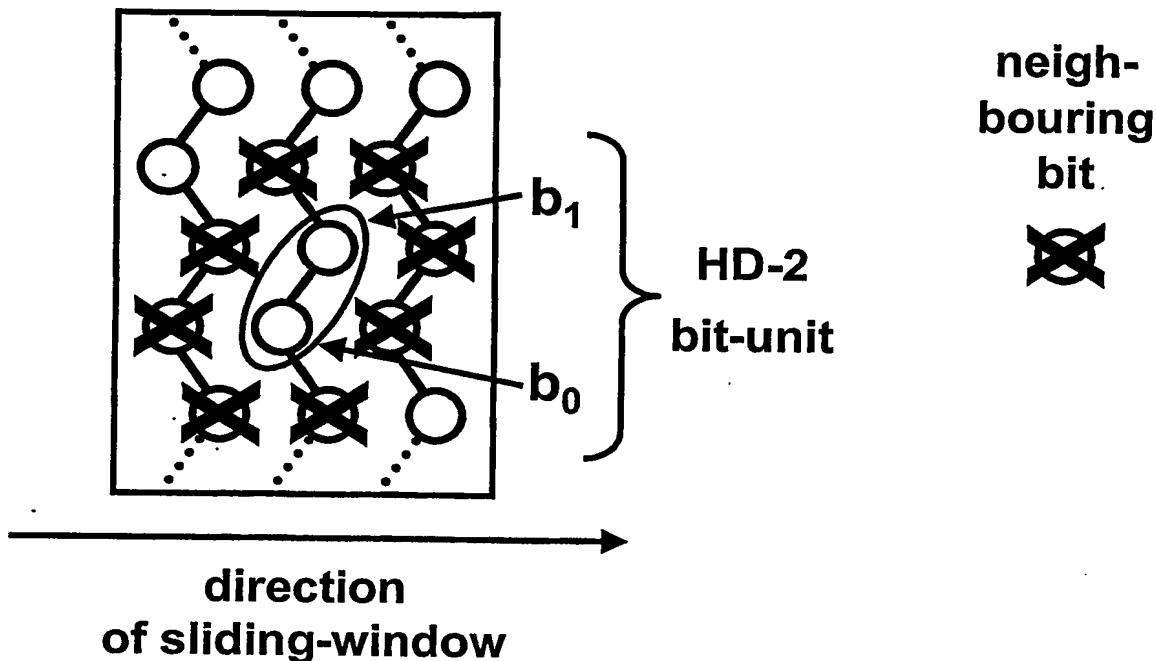


FIG.20

HF Reference-Levels
for HD-2 Bit-Unit

| bits HD-2 bit-unit b_0 b_1 | Reference-Level for bit b_0 | Reference-Level for bit b_1 |
|-----------------------------------|----------------------------------|----------------------------------|
| 0 0 | R_{00} | R_{00} |
| 0 1 | R_{01} | R_{01} |
| 1 0 | R_{10} | R_{10} |
| 1 1 | R_{11} | R_{11} |

FIG.21

FIG. 22

